Algebra 2 Name_____ ID: 1

LOF WKST 1-L

Date_____ Period____

Describe the transformations necessary to transform the graph of $f(x)$ into that of $g(x)$.

1) $f(x) = x^2$
$g(x) = (x-2)^2 - 2$

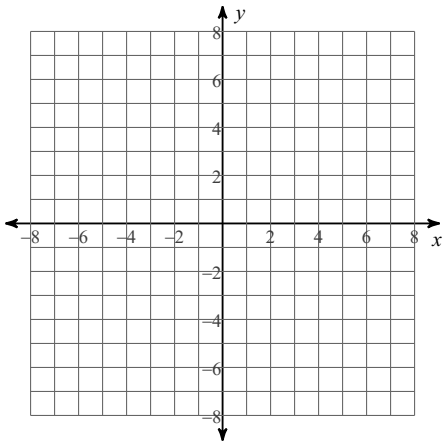
2) $f(x) = \sqrt{x}$
$g(x) = \sqrt{x-3} + 1$

3) $f(x) = x^2$
$g(x) = -(x-2)^2$

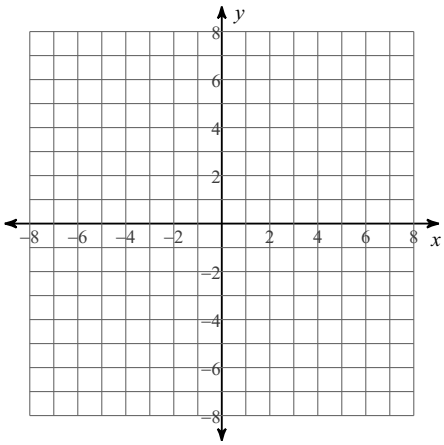
4) $f(x) = |x|$
$g(x) = -|x-2|$

Sketch the graph of each function. State the domain and range in interval notation.

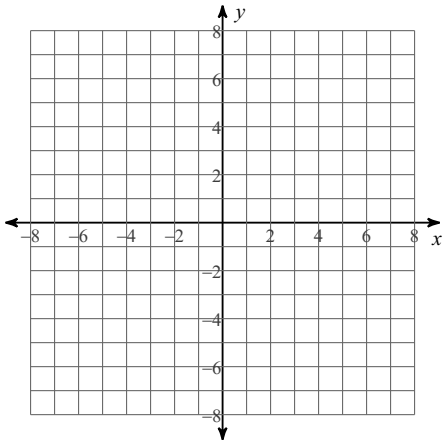
5) $g(x) = |x+2| - 3$



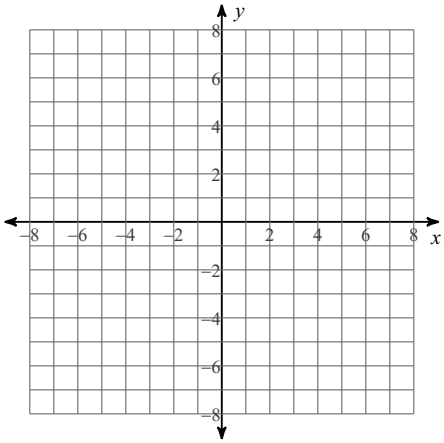
6) $g(x) = -x^2 - 2$



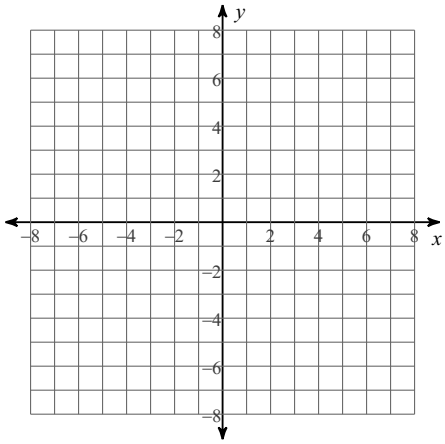
7) $g(x) = -\sqrt{x-1}$



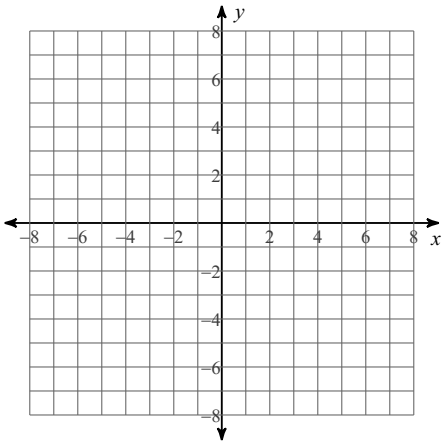
8) $g(x) = -|x| + 2$



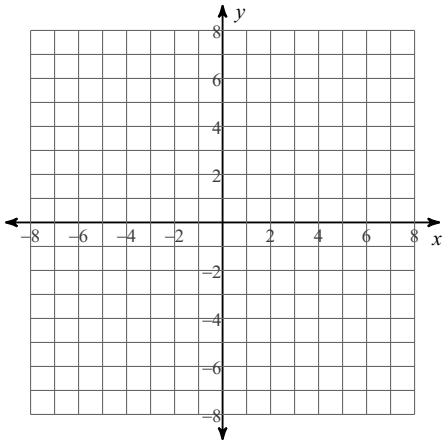
9) $g(x) = -|x+1|$



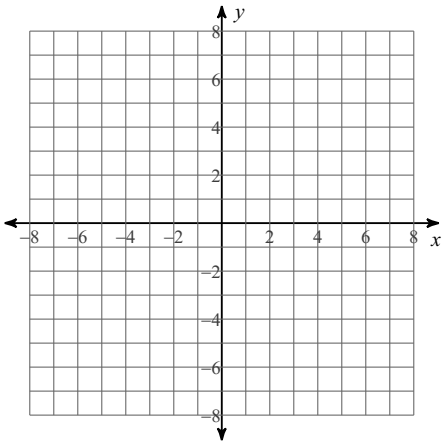
10) $g(x) = -\sqrt{x} + 3$



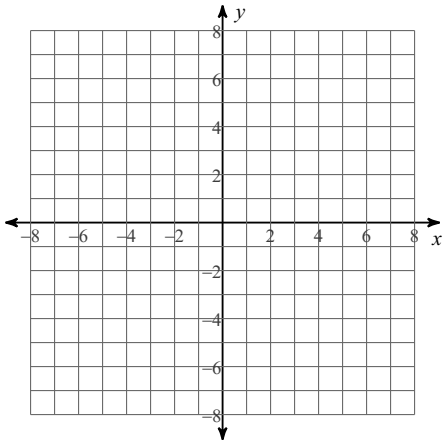
11) $g(x) = -(x+3)^2$



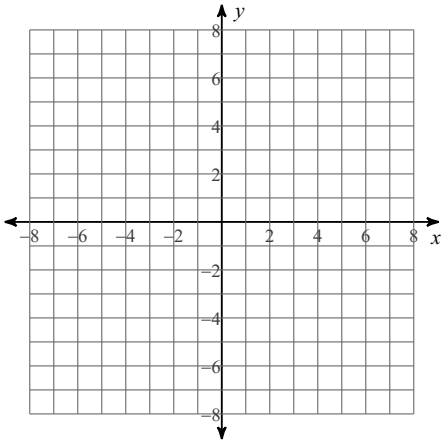
12) $g(x) = \sqrt{x-3} + 3$



13) $g(x) = -\sqrt{x+3} + 3$



14) $g(x) = (x+3)^2 + 2$



Describe the transformations necessary to transform the graph of $f(x)$ into that of $g(x)$.

15) $f(x) = |x|$
$g(x) = |x| - 3$

16) $f(x) = |x|$
$g(x) = |x-1|$

17) $f(x) = \sqrt{x}$
$g(x) = \sqrt{x-3} - 2$

18) $f(x) = |x|$
$g(x) = |x-2| + 1$

19) $f(x) = x^2$
$g(x) = -(x+3)^2 - 3$

20) $f(x) = |x|$
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Describe the transformations necessary to transform the graph of $f(x)$ into that of $g(x)$.

1) $f(x) = x^2$
$g(x) = (x - 2)^2 - 2$

translate right 2 units
translate down 2 units

2) $f(x) = \sqrt{x}$
$g(x) = \sqrt{x - 3} + 1$

translate right 3 units
translate up 1 unit

3) $f(x) = x^2$
$g(x) = -(x - 2)^2$

reflect across the x-axis
translate right 2 units

4) $f(x) = |x|$
$g(x) = -|x - 2|$

reflect across the x-axis
translate right 2 units

Sketch the graph of each function. State the domain and range in interval notation.

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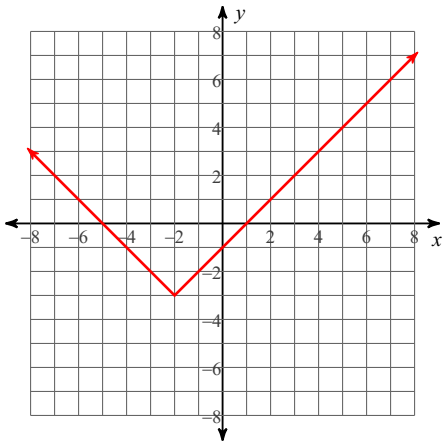

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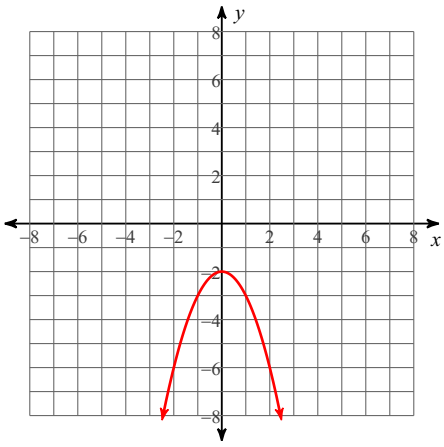
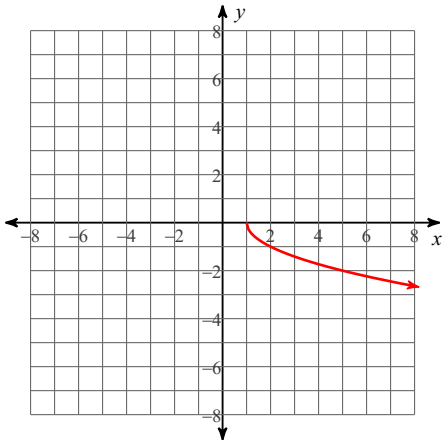
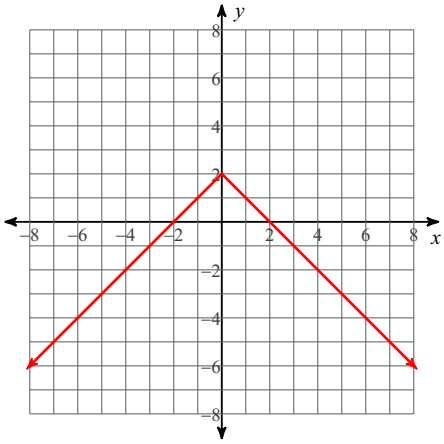


7) $g(x) = -\sqrt{x - 1}$



8) $g(x) = -|x| + 2$



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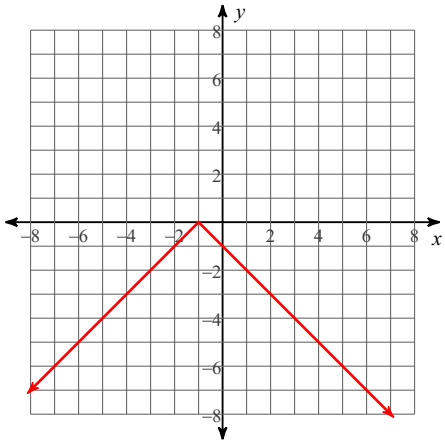

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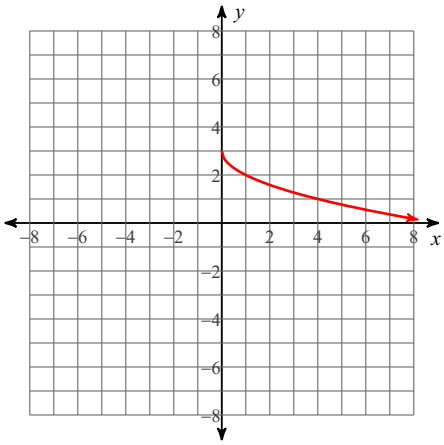

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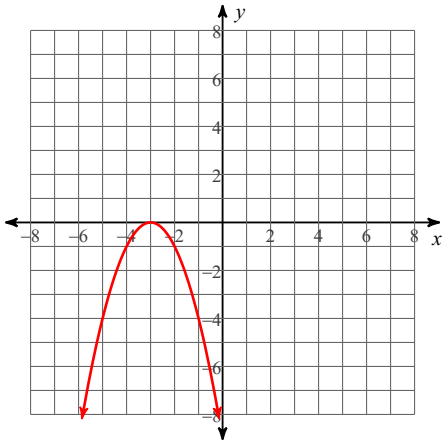

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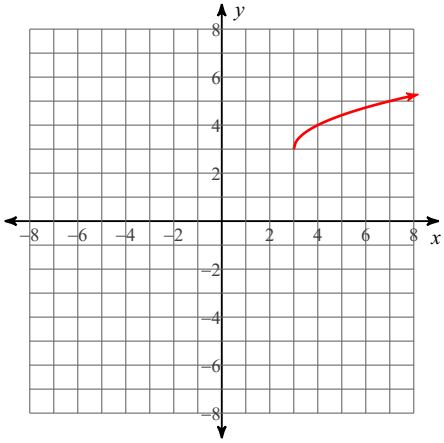

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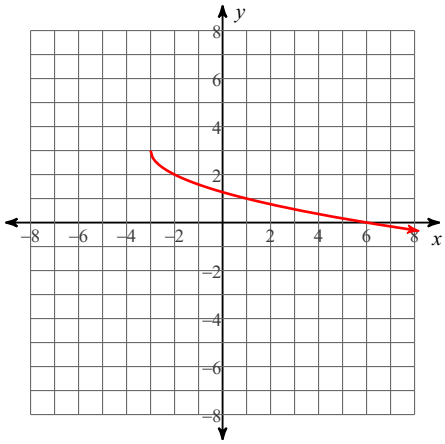

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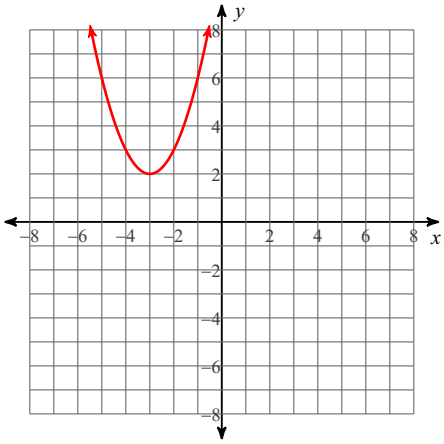

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